


MULTI-CIRCUIT MONITORING SYSTEM

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Electrical Application Solution Expert




APPLICATIONS



Data Acquisition



Energy Management

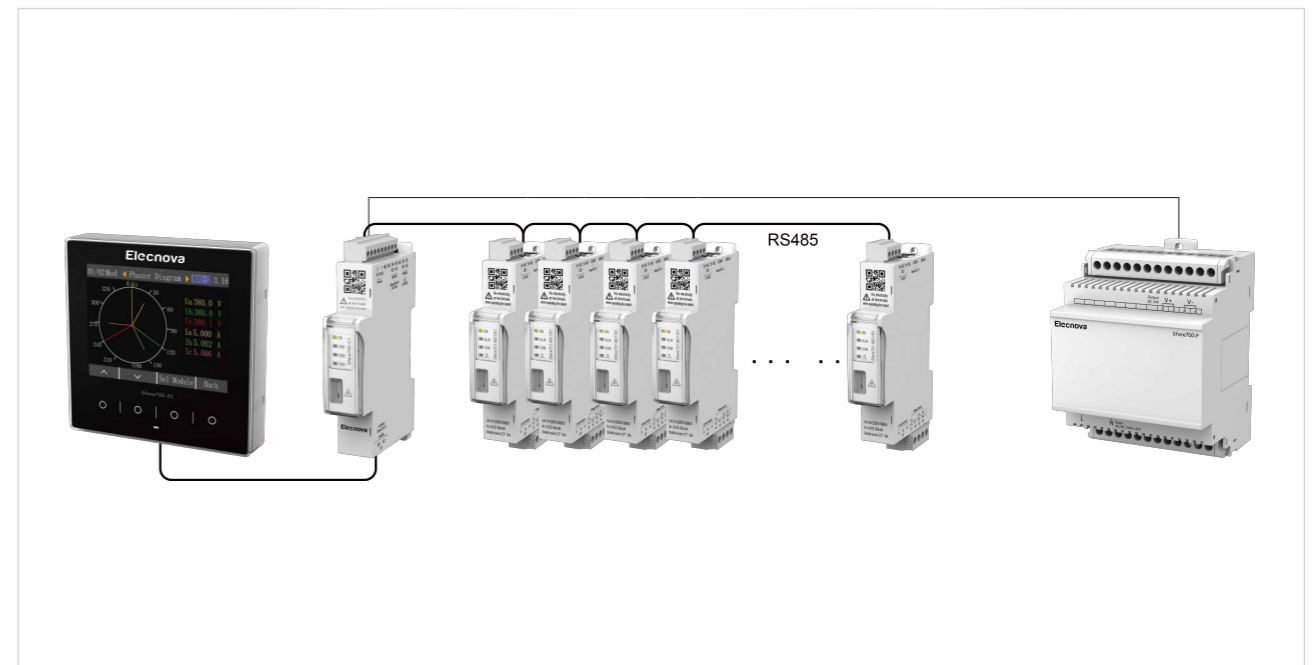


Remote Power Monitoring

DEVICES



PRODUCT COMBINATION



Sfere700 SERIES PRODUCTS LIST	One Display Module Sfere700-D1	One Communication Module Sfere700-C1
	One Power Supply Module Sfere700-P	32 Monitoring Modules Sfere700-M2 At Most
	Matched Current Transformers	Transfer Modules Specialized Connection Lines

Sfere700-M2



High Accuracy Measurement
 Compact Design
 Plug-in Fast Terminals
 Self Power Supply
 Automatic Networking



MAIN FEATURES

High Accuracy Measurement
 -Adopt solid current transformer to realize energy accuracy 0.5S

Compact Design
 -18mm width, installed near load point, less wiring

Plug Type Wiring Terminals
 -Quick installation

Self Power Supply
 - $U_a \geq 180V$

Automatic Networking
 -Communication address of module can be set automatically or by manual



COMPARISON TABLE

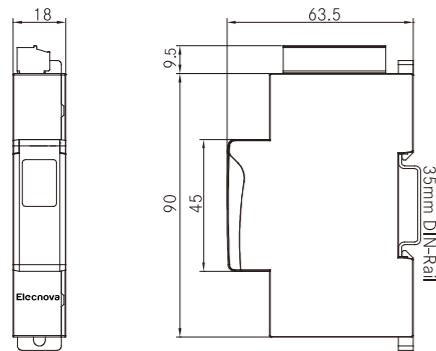


Model	Sfere700-M21	Sfere700-M22	Sfere700-M23
V/A/F/P/Q/S/PF	■	■	■
Demand	■	■	■
Max./Min./Avg. Value	■	■	■
Fundamental V/A/P/Q/S/PF	-	-	■
±kWh/±kvarh/kVAh	■	■	■
Four-quadrant Reactive Energy	■	■	■
Tariff Energy	-	■	■
Fundamental Energy	-	-	■
THD	■	■	■
Harmonics V/A	-	1st-63rd	1st-63rd
Unbalance	-	■	■
Crest Factor/K Factor	-	■	■
Flicker	-	-	■
Transient	-	-	■
Demand Record	-	■	■
Max./Min./Avg. Value record	-	■	■
Off-limit Record	-	■	■
SOE Record	-	■	■
Digital Input	2	2	2
Relay Output	1	1	1

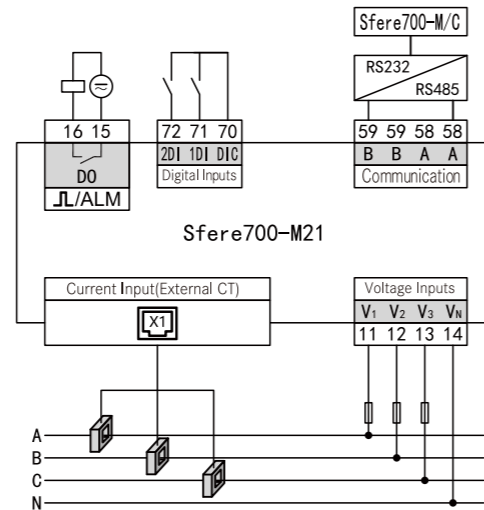
NOTE: "■": Yes "-": No



DIMENSIONS



TYPICAL WIRING



TECHNICAL SPECIFICATION

Environmental Conditions	Operating temperature	-20 °C ~70 °C
	Storage temperature	-40 °C ~85 °C
	Relative humidity	≤95%RH
	Altitude	≤2500m
	Working range	Ua≥180V
Self Power Supply		
Voltage Input	Rated value	3×220V/380V
	Impedance	≥1.7 MΩ/per phase
	Burden	≤0.1 VA /per phase
	Overload	Continuous: 1.2Vn Instantaneous: 2Vn/10s
	Frequency	45Hz~65 Hz
Current Input	External CT	
Relay Output	Contact rated at AC: 0.12A/400V; DC: 0.12A/400V, Isolation: 5kVAC	
Digital Input	2 dry contact inputs, Isolation: 4kVAC	
Communication Port	RS485, Modbus-RTU, 2-wire, up to 9600bps	
IP Degree	IP20	
Insulation	≥2kVAC	

Sfere700-D1



TFT Display
Touch Button
Breathing Light
Simple Installation
Compact Design
IP67(Front)
Safe Power Supply

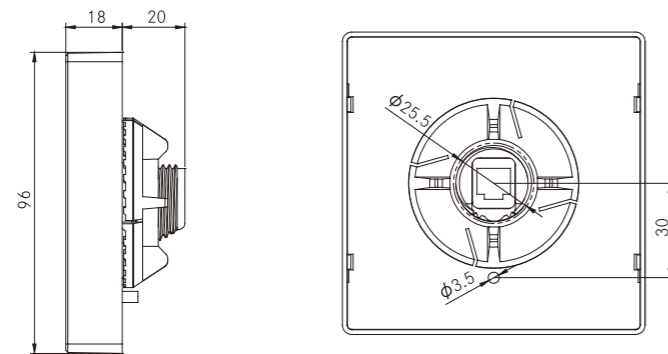


MAIN FEATURES

Display	-3.5"TFT, 320×RGB×240, 16.7M colors	Button	-Capacitive buttons
Breathing Light	-LCD OFF: 1Hz -Alarm: 2Hz	Simple Installation	-Screw mounting, plastic accessories are suitable for different cut-out sizes
Compact Design	-Panel thickness 18mm, RJ12 connection cable, small occupied space in cabinet	High IP	-IP67
Safe Power Supply	-DC 24V, wiring safety		

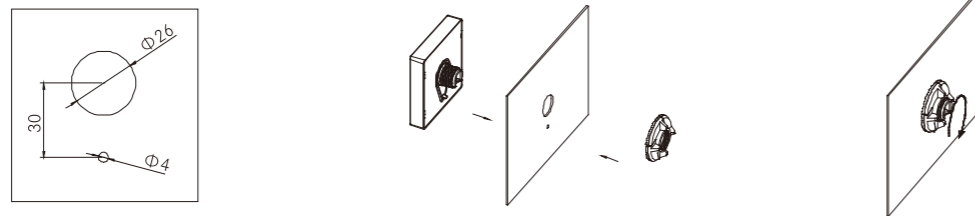


DIMENSIONS

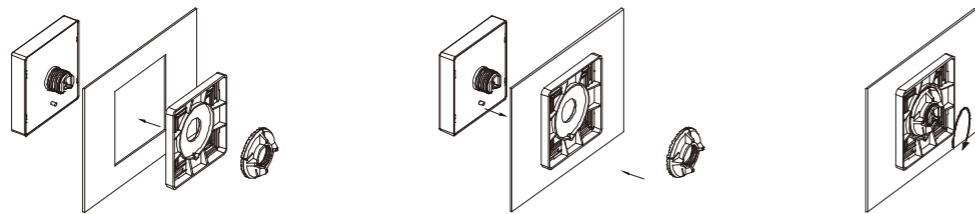


INSTALLATION

Installation Method 1



Installation Method 2 (Used for Cut-out Size 91×91mm, 76×76mm, 67×67mm)



TECHNICAL SPECIFICATION

Connection	RJ12 cable
Display	3.5"TFT, 320×RGB×240, 16.7m colors
Button	4 Capacitive buttons with backlight
Breathing Light	LCD OFF: 1Hz, Alarm: 2Hz
IP Degree	Front: IP67
Operating Temperature	-20 C ~ 70 C
Storage Temperature	-30 C ~ 80 C
Relative Humidity	≤95%RH
Safe Power Supply	(24±20%)VDC
Consumption	≤2W

Sfere700-C1



3 RS485 Ports
DIN Rail Mounting
Safe Power Supply



FUNCTION

3 RS485 Ports

-Sfere700-C1 has three communication ports. One port is used to connect to Sfere700-D1 by adopting RJ12, and the other two ports are used to connect to Sfere700-M and communication manager by adopting plug terminals.



MAIN FEATURES

DIN-rail Mounting

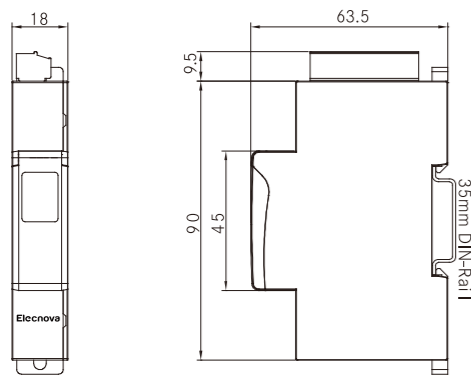
-Small occupied space

Safe Power Supply

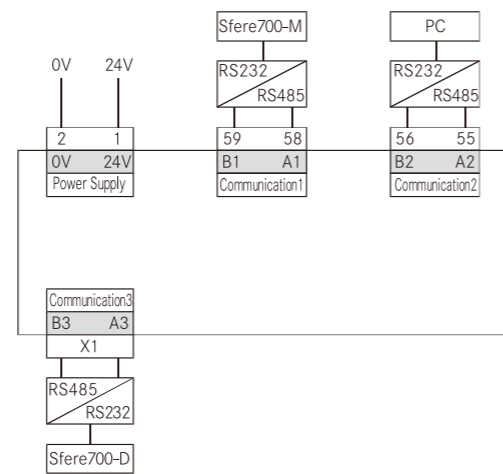
-DC 24V, wiring safety



DIMENSIONS



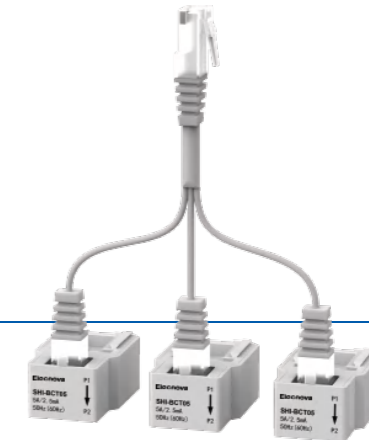
TYPICAL WIRING



TECHNICAL SPECIFICATION

Operating Temperature	-20 °C ~ 70 °C
Storage Temperature	-20 °C ~ 70 °C
Relative Humidity	≤95%RH
Altitude	≤2500m
IP Degree	IP20
Insulation	≥2kVAC
Safe Power Supply	DC 24V
Consumption	≤0.5W
Communication Port(COM3)	RS485, Modbus-RTU, up to 38.4kbps

CURRENT TRANSFORMER



SOLID CORE CT

Model	SHI-BCT05	SHI-BCT100	SHI-BCT200	SHI-BCT400	SHI-BCT600
Rated Current	5A	100A	200A	400A	600A
Maximum Current	10A	120A	240A	480A	720A
Accuracy	0.1%	0.1%	0.1%	0.1%	0.1%
Isolation Voltage	4kVAC	4kVAC	4kVAC	4kVAC	4kVAC
Operating Temperature	-40 °C ~ 70 °C	-40 °C ~ 70 °C	-40 °C ~ 70 °C	-40 °C ~ 70 °C	-40 °C ~ 70 °C
Storage Temperature	-40 °C ~ 70 °C	-40 °C ~ 70 °C	-40 °C ~ 70 °C	-40 °C ~ 70 °C	-40 °C ~ 70 °C
Diameter(mm)	8	18	24	29	29
Dimension(mm)	28×18×44	36×20×59	60×20×80	75×22.5×95	75×22.5×95

SPLIT CORE CT



Model	SHI-SCT05	SHI-SCT100	SHI-SCT200	SHI-SCT400	SHI-BCT600
Rated Current	5A	100A	200A	400A	600A
Maximum Current	6A	120A	240A	480A	720A
Accuracy	1%	0.5%	0.5%	0.5%	0.5%
Isolation Voltage	4kVAC	4kVAC	4kVAC	4kVAC	4kVAC
Operating Temperature	-40 °C ~ 70 °C	-40 °C ~ 70 °C	-40 °C ~ 70 °C	-40 °C ~ 70 °C	-40 °C ~ 70 °C
Storage Temperature	-40 °C ~ 70 °C	-40 °C ~ 70 °C	-40 °C ~ 70 °C	-40 °C ~ 70 °C	-40 °C ~ 70 °C
Diameter(mm)	10	16	24	35	35
Dimension(mm)	29×27×42	30×31×53	44×39×70	57×41×84	57×41×84

FLEXIBLE CT

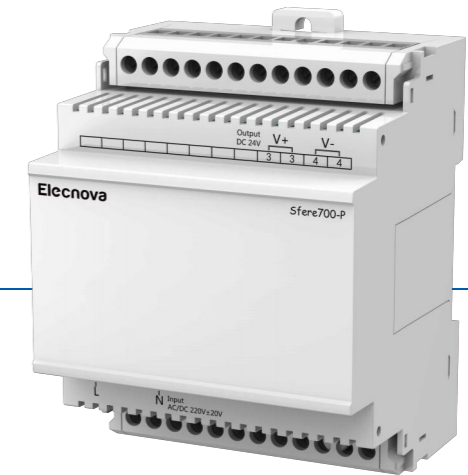


Model	SHI-FCT600	SHI-FCT1000	SHI-FCT2000	SHI-FCT3000
Rated Current	600A	1000A	2000A	3000A
Range	60~720A	100~1200A	200~2400A	300~3600A
Accuracy	1%	1%	1%	1%
Operating Temperature	-20 °C ~ 70 °C	-20 °C ~ 70 °C	-20 °C ~ 70 °C	-20 °C ~ 70 °C
Storage Temperature	-30 °C ~ 90 °C	-30 °C ~ 90 °C	-30 °C ~ 90 °C	-30 °C ~ 90 °C
Diameter(mm)	65	95	95	95

Sfere700-P



DIN Rail Mounted
Safe Power Supply
Cable Length



FUNCTION

DIN Rail Mounted

-Quick installation

Safe Power Supply

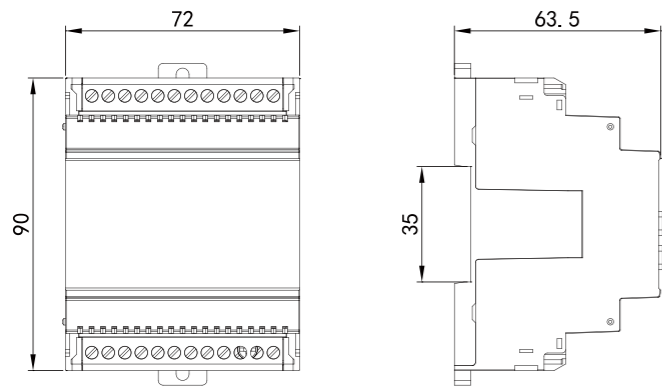
-DC 24V, wiring safety

Cable Length

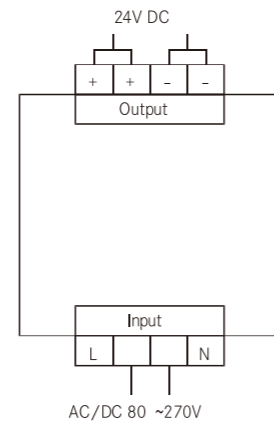
-Power supply cable length ≤100m



DIMENSIONS



TYPICAL WIRING



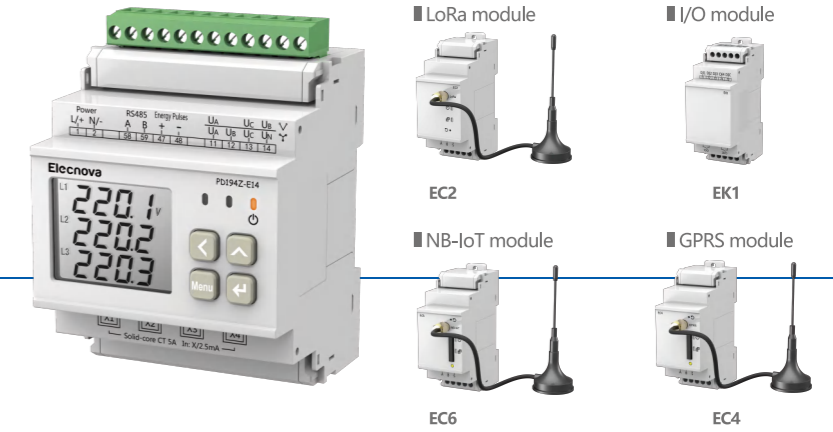
TECHNICAL SPECIFICATION

Safe Power Supply	AC/DC 80V~270V
Output Voltage	DC: 24V
Output Power	≤20W
Accuracy	±1%
Effectiveness	≥75%
Insulation	≥2kVAC

PD194Z-E14



Multi-circuit
 Harmonics
 Modbus Interface
 Energy Accuracy 0.5S
 Pulse Output



DEVICES

FUNCTION

- Networks**
 - TN, TT, IT networks
- Communication**
 - Interface: RS485
 - Protocol: Modbus-RTU
 - LoRa
 - NB-IoT
 - GPRS
- Accuracy**
 - Energy: 0.5S (Closed Type CT)
 - Voltage: 0.2%
 - Current: 0.2%

MAIN FEATURES

- Measuring**
 - Fundamental V/A
 - Demand
 - Max./Min. Value
- Power Quality**
 - THD
 - Harmonics up to 31st
 - Sequence component
 - Unbalance
 - Crest factor and K factor
- Energy Metering**
 - Bi-directional energy
 - Four-quadrant reactive energy
 - Tariff energy
 - Fundamental energy

APPLICATIONS

- Data Acquisition
- Energy Management
- Remote Power Monitoring